

AMENDMENT

In the Claims:

This listing of claims will serve to replace all prior versions and listings of claims in the present application:

1. (Currently amended) A rotary liquefied natural gas boil-off compressor comprising ~~having~~ at least two compression stages in series, a gas passage passing through the series of compression stages, the gas passage extending through and being in heat exchange relationship with at least one cooling means disposed ~~between the or each pair of~~ compression stages, ~~characterised in that wherein~~ the cooling means ~~or~~ at least one of the cooling means is a cryogenic cooling means ~~and in that there is~~ having valve means for controlling flow of cryogenic coolant into the cryogenic cooling means in response to the an inlet temperature, or a related parameter, of the ~~next~~ compression stage next in series downstream of the cryogenic cooling means ~~so as, in use,~~ to maintain said inlet temperature at a ~~chosen sub-ambient~~ temperature ~~or~~ between chosen sub-ambient temperature limits.
2. (Currently amended) The compressor according to claim 1, ~~characterised in that wherein~~ the cryogenic cooling means comprises an indirect cooling means.
3. (Currently amended) The compressor according to claim 1, ~~characterised in that wherein~~ the cryogenic cooling means comprises a direct cooling means.
4. (Currently amended) The compressor according to claim 3, ~~characterised in that wherein~~ the direct cooling means comprises a chamber having an inlet for the introduction of a cryogenic liquid.

5. (Currently amended) The compressor according to claim 4,
~~characterised in that the outlet of~~ wherein the direct cooling
~~communicates means comprises an outlet in communication~~ with a
vessel adapted to disengage particles of liquid from the natural gas,
the vessel having an outlet for the natural gas ~~communicating to~~
communicate with said next compression stage.
6. (Currently amended) The compressor according to claim 1,
~~characterised in that there is~~ further comprising a cryogenic cooling
means intermediate each pair of successive compression stages.
7. (Currently amended) The compressor according to claim 1,
~~characterised in that wherein~~ there are at least three compression
stages in sequence, ~~and in that there is~~ at least one direct cryogenic
cooling means and at least one indirect cryogenic cooling means.
8. (Currently amended) The compressor according to claim 7,
~~characterised in that wherein~~ an inlet of a the at least one direct
cryogenic cooling means communicates with an outlet of ~~an~~ the at
least one indirect cooling cryogenic means.
9. (Currently amended) The compressor according to claim 1,
~~characterised in that there is~~ comprising a cryogenic cooling means
downstream of the a final stage of the series of compression
stagesstages.
10. (Currently amended) The compressor according to claim 1,
~~characterised in that there is~~ comprising a cryogenic cooling means
upstream of the a first stage of the series of compression ~~stages~~stages.

11. (Currently amended) The compressor according to claim 1, ~~characterised in that~~ wherein the compressor ~~has~~ comprises an intermediate inlet communicating with a forced liquefied natural gas vaporiser.
12. (Currently amended) A liquefied natural gas storage tank having an outlet for boiled-off natural gas communicating with a the compressor ~~as claimed in~~ of claim 1, ~~the~~ said cryogenic cooling means communicating in communication with the liquefied natural gas in the storage tank.
13. (Currently amended) A method of operating a rotary liquefied natural gas boil-off compressor having at least two compression stages in series and a gas passage passing through the series of compression stages, the method comprising cooling ~~[[the]]~~ compressed boiled-off natural gas by ~~means of~~ a cryogenic coolant downstream of one of the compression stages and upstream of another one of the compression stages in series, monitoring ~~[[the]]~~ an inlet temperature, or a related parameter, of the compressed natural gas at ~~[[the]]~~ an inlet to the other compression stage, and adjusting ~~[[the]]~~ a flow rate of the cryogenic coolant so as to maintain said inlet temperature at a ~~chosen sub-ambient temperature or~~ between chosen sub-ambient temperature limits.
14. (Currently amended) The method according to claim 13, characterised ~~in that~~ wherein the inlet temperature of each of the compression stage stages is maintained at a temperature in the range of minus 50 °C to minus 140°C.
15. (Currently amended) The method according to claim 14, characterised ~~in that~~ wherein the pressure ratio across each of the compression stage stages is in the range 2.15 : 1 to 3 : 1.

16. (Currently amended) The method according to claim ~~[[15]]~~ 14,
~~characterised-in-that~~ wherein the pressure ratio across each of the
compression stagestages is in the range 2.5 : 1 to 3 : 1.